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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Crowell & Morning LLP
Intellectual Property Group
P O Box 14300
Washington, DC 20044-4300

EXAMINER

QUAN, ELIZABETH S

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 12/18/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,949

Applicant(s)

MARTINEZ MARTINEZ,
ESTANISLAO

Examiner

Elizabeth Quan

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspond nce address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the a pipe of inert material, adapter pipe, vacuum pump, and suction capillary must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: adapter tube (9) and capillary suction tube (10). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "2" and "5" have both been used to designate tube and probe. It appears that "tube" and "probe" represent the same element. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because “taking of” in the first line can be omitted. In the third line from the bottom “Into one of the drilled holes” is stated in an awkward manner. Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities: On page 1, line 6, “dampened water” should be omitted. The sentence on page 1, lines 15-20, is confusing. The sentence on page 2, lines 2 and 3 is a fragment. On page 2, lines 9 and 10, the language “the device is used to control ponds for decanting...” is awkward. On page 2, line 11, “pyrometrical” should be “pyrometric.” Furthermore, it is unclear how pyrometric describes the capsule. According to Merriam-Webster Collegiate Dictionary, pyrometric is the adjective based on pyrometer, which has a definition of an instrument for measuring temperatures especially when beyond the range of mercurial thermometers. The sentence on page 2, lines 19-21, is confusing. On page 3, line 13 “an” should be replaced by “a.” The detailed description of drawings does not really go into the detail of the figure.

Appropriate correction is required.

7. The disclosure is objected to because of the following informalities: The Brief Description of Drawings does not describe the figure. See below for a description of what should be in the Brief Description of Drawings.

Appropriate correction is required.

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should

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be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

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- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication, which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application, which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

8. Claim 1 is objected to because of the following informalities: “taking of” in line 1 could be omitted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Referring to claim 1, it is unclear how pyrometric describes the capsule. According to Merriam-Webster Collegiate Dictionary, pyrometric is the adjective based on pyrometer, which has a definition of an instrument for measuring temperatures especially when beyond the range of mercurial thermometers. The specification does not define pyrometric. Examiner has interpreted “pyrometric” as defining the shape of the capsule and relied on the drawings for the shape. It appears that “pipe” and “tube” are two terms used to describe the same element. The claim recites “a rubber cap with drilled holes hermetically sealing the pipe, and adapter pipe being fitted into one of the holes and being connectable to a vacuum pump...” The specification states that “a rubber cap is attached on the free end of the tube to obtain a hermetic seal... Two holes (7,8) are drilled into cap (6) into one of which holes is attached the end of an adapter tube (9) to a vacuum pump (not shown)...” The ends of the capsule could be positively recited with a first end and a second end instead of an end and another end. The drilled holes in the rubber cap

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could be positively recited with a first hole and a second hole instead of one of the holes and another of the holes. The presence of "a pipe" and "an adapter pipe" is confusing. The recitation of "a probe of a pyrometric capsule" is confusing. From the drawings, the probe and capsule are not a single unitary structure. Examiner has interpreted the probe as having two parts comprising of a capsule and pipe.

13. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "probe" in claim 1 is used by the claim to mean "container," while the accepted meaning is "an instrument for penetrating or inserting."

14. Claims 2-5 provide for the use of the device for agricultural, environmental, and industrial applications, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 2-5 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

15. Referring to claim 3, "comprise studies" should be replaced by "comprises the studies." It is unclear what the "composition of different chemical forms" means. The term "forms" should be omitted. Because chelates are in parentheses, the mete and bounds of the claim are

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unclear. Does the study of the evolution and degradation of organic compounds as recited include chelates as a subset of the group or only chelates? It is improper to have a sentence or a sentence fragment in the claim, specifically “Also, to discover the evolution and availability of fertilizing nutrients in general, over the whole soil profile.”

16. Referring to claim 4, “whereas” should be “wherein.” In line 2, “comprise control” should be replaced by “comprising the control of” In line 3, “in general” should be omitted. The term “such as” does not clearly set forth the metes and bounds of the claim. Because chelates and remains of pesticides are in parentheses, the mete and bounds of the claim are unclear. Does the organic compounds as recited include chelates as a subset of the group or only chelates?

17. Referring to claim 5, “pond control with decanting...” is stated in awkward language.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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20. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,871,699 to Ruggeri in view of U.S. Patent No. 5,578,455 to Tosa et al., U.S. Patent No. 6,179,787 to Kelly et al., U.S. Patent No. 5,432,098 to Wilks, and U.S. Patent No. 6,270,727 to Mitchell et al.

Referring to claims 1-3, Ruggeri disclose a device (10) for drawing liquid samples and dispensing them into a plurality of test tubes (see ABSTRACT; FIGS. 1-5, 7, and 9-11; COL. 1, lines 10-30; COL. 5, lines 14-67; COL. 6, lines 1-19). The device (10) comprises a test tube (15) of an integrated probe assembly with a capsule and pipe and a rubber cap (14) hermetically sealing the test tube (15) (see FIGS. 1-5, 7, and 9-11; COL. 8, lines 23-29). Since the cap (14) receives an adapter pipe (16) that connects to a vacuum source (23) and suction capillary (13) that extends within the interior of the test tube (15), the cap inherently has two separate holes for receiving the adapter pipe (16) and suction capillary (13) (see FIGS. 1-5, 7, and 9-11; COL. 8, lines 23-56; COL. 9, lines 23-34).

While the Ruggeri does not explicitly disclose holes are drilled within the cap, the patentability of the device does not depend on its method production. Furthermore, according to Merriam-Webster's Collegiate Dictionary, the definition of drill includes 1) to bore or drive a hole in or 2) to make by piercing action. Therefore, inserting the adapter pipe (16) and suction capillary (13) inherently drills the two separate holes.

Ruggeri does not describe the vacuum source (23) and ancillary equipment (24) as a vacuum pump. However, it is well known and commercially available to use a vacuum pump to provide a vacuum source, as evident in Tosa et al. (see COL. 3, lines 17-24). It

appears that a vacuum pump can be easily automated for controlled speed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ruggeri et al. to provide a vacuum pump as in Tosa et al. for easy automation.

Ruggeri does not disclose a probe assembly comprising a capsule and pipe. However, Kelly et al. disclose a probe assembly (150) with a capsule (100) with an end (106) of lesser diameter than the other end (102), which attaches a pipe (78) (see FIGS. 3, 4, 6, and 7; COL. 4, lines 35-67; COL. 5, lines 1-7). The assembly (150) addresses the need for a full-draw low-volume sample collection assembly with the external dimensions of the standard-sized tube, as partial-draw tubes exhibit a reduction in the draw rate of a sample, which reduces the collection efficacy of the tubes (see COL. 2, lines 5-15; COL. 3, lines 20-40). The sample would also be accessible from both ends of the assembly. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ruggeri et al. to provide a probe assembly with a capsule with an end of lesser diameter than the other end in which a pipe is attached as in Kelly et al. to reduce collection of tubes and allow accessibility from both ends.

Ruggeri does not explicitly disclose a pipe of inert material. It is well known to use inert materials to prevent damage to the pipe from the samples and reagents. Wilks discloses that the apparatus is constructed materials inert or non-reactive to the chemical or corrosive action of solids, semi-solids or fluid components contained within the specimens handled (see COL. 8, lines 35-39). Wilks also discloses the use of the

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apparatus in agricultural applications. Solid and liquid components, particularly volatile organic contaminants, may be contained in a soil sample (see COL. 7, lines 4-8). The contaminants are released from the sample during extraction and collected for analysis by a gas chromatograph or mass spectrometer (see COL. 7, lines 4-20). While the procedure is often used for pesticide analysis of soil samples in agricultural applications, it may also be considered an environmental application, as contaminants or pollutants in soil are being analyzed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ruggeri et al. to use a pipe from inert materials as in Wilks to prevent damage from chemical or corrosive action.

Ruggeri does not disclose the capsule made of porous porcelain. However, Mitchell et al. disclose a sample container (20) made from a reticulated ceramic material using alumina grains to form a slurry with silica and a porcelain cement (see COL. 3, lines 2-7). The material makes the container resistant to high temperatures, allows venting of the container, and repeated use of the container (see COL. 1, lines 15-31 and 34-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ruggeri to use a capsule made of porous porcelain as in Mitchell et al. to make the container resistant to high temperatures, allow venting of the container, and allow repeated use of the container.

21. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,871,699 to Ruggeri in view of U.S. Patent No. 5,578,455 to Tosa et al., U.S. Patent

No. 6,179,787 to Kelly et al., U.S. Patent No. 5,432,098 to Wilks, and U.S. Patent No. 6,270,727 to Mitchell et al., and further in view of U.S. Patent No. 5,783,155 to Greenler et al.

Referring to claims 2 and 4, while Ruggeri, Tosa et al., Kelly et al., Wilks, and Mitchell et al. do not explicitly disclose the use of the device for environmental applications, it is well known to use the apparatus for environmental applications.

Greenler et al. disclose an apparatus for acquiring samples of rain water for analysis to detect hazardous substances in water flow to monitor the environment (see COL. 1, lines 9-67; COL. 2, lines 1-13). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the apparatus of Ruggeri, Tosa et al., Kelly et al., Wilks, and Mitchell et al. for environmental applications given the ample possibilities of applications as recited or provided in the claim.

22. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,871,699 to Ruggeri in view of U.S. Patent No. 5,578,455 to Tosa et al., U.S. Patent No. 6,179,787 to Kelly et al., U.S. Patent No. 5,432,098 to Wilks, and U.S. Patent No. 6,270,727 to Mitchell et al., and further in view of U.S. Patent No. 5,891,740 to Di Cesare et al.

Referring to claims 2, 4, and 5, while Ruggeri, Tosa et al., Kelly et al., Wilks, and Mitchell et al. do not explicitly disclose pond control, it is well known to use the apparatus for pond control. However, Di Cesare et al. disclose decanting pond water to capture atrazine in a C18 membrane disc, eluting the disc, capturing the enriched analyte samples, and analyzing the sample for atrazine (see COL. 6, lines 60-67; COL. 7, lines 1-22). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the apparatus of Ruggeri, Tosa et al., Kelly et al.,

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Wilks, and Mitchell et al. for industrial applications such as pond control given the ample possibilities as recited or provided in the claim.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They include one or more limitations in the claims.

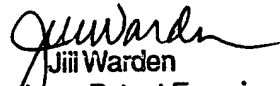
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (703) 305-1947. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 879-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elizabeth Quan
Examiner
Art Unit 1743

eq
December 14, 2002


Jill Warden
Supervisory Patent Examiner
Technology Center 1700